

USSR/Biology

FD 421

Card 1/1

Author : Imshenetskiy, A. A. and Ruban, Ye. L.

Title : Cell-less nitrification. I. Growing Nitrosomonas cultures and obtaining autolysates of cells

Periodical : Mikrobiologiya, 23, 271-274, May/Jun 1954

Abstract : A cell-free autolysate capable of effecting nitrification results after a mixture of Nitrosomonas cells and grass powder are crushed in a sterile mortar, and the glass and cell residues have been filtered out. A large quantity of Nitrosomonas is necessary for the production of the autolysate. The required number of cells can not be obtained by culturing Nitrosomonas on dishes containing a gel medium. A sufficient quantity can be obtained, however, by using a deep aeration method of culturing. The resultant autolysate is also free of the cells of heterotrophic microorganisms. Five Soviet references.

Institution : Institute of Microbiology of the Academy of Sciences, USSR; Moscow

Submitted : November 16, 1953

IMSHENETSKIY, A-A.

USSR

Noncellular nitrification. II. Oxidation of ammonia by cell autolysates from *Nitrosomonas*. A. A. Imshenetskiy and E. L. Ruban (Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow). *Mikrobiologiya* 23, 823-8 (1984); cf. C.A.B. 48, 14668c. —Autolysate filtrates from nitrifying bacteria contain  $\text{NH}_4$  and nitrites. In 5 days the  $\text{NH}_4$  content drops by 75% or more, sometimes almost 100%. This effect is also observed in presence of added  $(\text{NH}_4)_2\text{SO}_4$ . This oxidation of  $\text{NH}_4$  forms only relatively small amounts of nitrite. The autolysate filtrates from heterotrophic organisms generally show higher instead of lower  $\text{NH}_4$  content on standing; in both cases the total N content remains the same. The oxidation proceeds in 2 stages, first forming intermediate products and then nitrite; the first stage is more active than the second in autolysates from nitrifying bacteria. *Nitrosomonas* was used in prep. the autolysates; the heterotrophic organisms employed for comparison were *Saccharomyces cerevisiae*, *Pseudomonas* species, and *Aspergillus niger*.  
Julian F. Smith

IMSHENETSKIY, A.A.

"Physiology of fungi." V.Lilly and H.Barnett. Reviewed by A.A.  
Imshenetskii. Mikrobiologiya 23 no.4:498-502 Jl-Ag '54. (MLRA 7:9)  
(FUNGI--PHYSIOLOGY)

IMSHENETSKIY, A. A.

USSR/Biology - Bacterial Mutation

FD-1413

Card 1/1 : Pub. 73 - 2/11

Author : Imshenetskiy, A. A. and Kasatkina, I. D.

Title : ~~Activity of hydrolytic enzymes and the mutability of Bac. Mesentericus~~  
The activity of hydrolytic enzymes and the mutability of Bac. Mesentericus

Periodical : Mikrobiologiya, 23, 6, 648-655, Nov-Dec 1954

Abstract : In an effort to determine the differences in the physiological activity of variants of bacterial species, the characteristics of the amylolytic and proteolytic activities of rugose and smooth forms of Bac. mesentericus were investigated. Under identical culture conditions, more active hydrolytic enzymes were found in cultures of rugose variants of Bac. mesentericus than in cultures of smooth variants, although the rate of reproduction was the same for both variants. The results of the investigations are presented on six charts and a graph. Five Soviet references are cited.

Institution : Institute of Microbiology, Academy of Sciences USSR

Submitted : 17 June 1954

IMSHENETSKIY, A.A.

Variability and selection of microorganisms. Priroda 43 no.5:35-44 May '54.  
(MLRA 7:5)

1. Chlen-korrespondent Akademii nauk SSSR. (Microorganisms)



IMSHENETSKIY, A.A.

LITVINOV, M.A.

Cellulose and bacteria ("Microbiology of cellulose." A.A.Im-  
shenetskii. Reviewed by M.A.Litvinov). Priroda 43 no.8:124-126  
Ag '54. (MIRA 7:8)  
(Imshenetskii, A.A.) (Cellulose) (Bacteria)

1955-

*Imshenetskiy*

IMSHENETSKIY

APPROVED FOR RELEASE: 08/10/2001 I.. CIA-RDP86-00513R000618610006-3

Imshenetskiy, A. A. *Redaktor*.  
tekhnicheskii redaktor.

[Isotopes in microbiology; transactions of the conference on the use of tagged atoms in microbiology] *Isotopy v mikrobiologii; trudy konferentsii po primeneniyu mechenykh atomov v mikrobiologii*. Moskva, Izd-vo Akademii nauk SSSR, 1955. 238 p. (MLRA 8:11)

1. Akademiya nauk SSSR, Institut mikrobiologii. 2. Chlen-korrespondent AN SSSR (for Imshenetskiy)  
(Radioisotopes) (Microbiology)



IMSHENETSKIY, A.A., redaktor; SHEMAKHANOVA, N.M., redaktor; SHEVCHENKO, G.N., tekhnicheskiy redaktor.

[Proceedings of the conference on mycotrophy of plants] Trudy konferentsii po mikotrofii rastenii. Moskva, 1955. 352 p.  
(MLRA 8:11)

1. Akademiya Nauk SSSR. Institut mikrobiologii.  
(Mycorrhiza)

USSR/ Biology - Microbiology

Card 1/1 Pub. 124 - 8/40

Authors : Imshenetskiy, A. A., Memb. Corresp., Academ. of Sc., USSR

Title : Selection of fungi cultures for fermentation industry

Periodical : Vest. AN SSSR 1, 46-48, Jan 1955

Abstract : Biological data are presented on the selection of fungi cultures (*Aspergillus oryzae* cultures) of plant and animal origin necessary for the fermentation industry. Table

Institution : .....

Submitted : .....

IMSHENETSKIY, A. A.

Myxobacteria mistaken for nitrifying bacteria. Mikrobiologiya  
24 no.1:14-21 Ja-F '55. (MLRA 8:4)

1. Institut mikrobiologii Akademii nauk SSSR, Moskva.

(MYXOCOCCUS,  
differentiation from Nitrosomonas)

(NITROSOMONAS,  
differentiation from Myxococcus)

IMSHENETSKIY, A. A.

Acclimatization of yeasts to poisons. A. A. Imshenetskiy and K. Z. Perova (Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow). *Mikrobiologiya* 24, 147-50 (1955).—Resistance of *Saccharomyces cerevisiae* was increased about 10-fold (from 1:80,000 to 1:8500) in mediums with increasing  $HgCl_2$  concns. The adaptation required 893 passes with small concn. gradients. Resistance to  $PhOH$  was similarly increased about 8-fold (from 1:4000 to 1:500) in 400 passes. If a concn. increment does significant harm the culture must be taken back to a lower concn. for a less abrupt return to the concn. at which resistance was inadequate. J. F. S.

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IMSHENETSKIY, A. A.

✓ Physiological properties of microorganism strains obtained with the aid of intensified factors. A. A. Imshenetskiy (Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow). *Mikrobiologiya* 24, 285-90 (1935).—Mutants of *Penicillium* species have reached 70 times the initial capacity to form penicillin; *Aspergillus* mutants have had their amylolytic and proteolytic activities enhanced; and *Saccharomyces cerevisiae* has been activated, by intensifying such factors as irradiation and aeration. Weakened and degenerative forms commonly accompany the development of activated strains. Selection is facilitated by morphological differences by which unwanted strains can be detected and discarded. J. F. S.

IMSHENETSKIY, A.A.

"Bacterial physiology." Reviewed by A.A. Imshenetskii. Mikro-  
biologia 24 no.4:486-495 J1-Ag '55 (MLBA 8:11)  
(BACTERIA)

IMSHENETSKIY, A-A.

MD ✓ Noncellular nitrification. III. Kinetics of nitrite and  
 cumulation. A. A. Imshenetskiy, H. L. Rubin, and O. D.  
 Ruzina (Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow).  
 Mikrobiologiya 24, 539-44 (1985); *et. C.A.* 49, 12134h.  
 Cell-free filtrates from *Nitrosomonas europaea* contain  
 enough enzyme activity for copious oxidation of  $\text{NH}_4^+$  to  
 nitrite, reaching a peak reaction rate on the 1st or 2nd day  
 and tapering off after the 5th day. Usually the peak nitrite  
 content in the culture is reached in 10-27 days, followed by a  
 decrease. Not all the evolved  $\text{NH}_4^+$  appears as nitrite;  
 the deficit is greater in acellular filtrates than in cell cultures.  
 Total N content remains constant. In both cases (no deficit at  
 the end). Comparative tests with *Mycobacterium rubrum*  
 showed copious  $\text{NH}_4^+$  formation but only slight oxidation to  
 nitrite. Julian P. Smith

IMSHENETSKIY, A. (A.)

IMSHENETSKIY, A.; KASHKIN, P.; KONOKOTINA, A.; KRASIL'NIKOV, N.; KRISS, A.;  
KUDRYAVTSE, V.; LITVINOV, M.; MEYSEL', M.; RAUTENSHTEYN, Ya.

Aleksandra Alekseevna Bachinskaia; obituary. Mikrobiologiya 24  
no.5:650-651 S-O '55. (MLRA 9:1)  
(BACHINSKAIA, ALEKSANDRA ALEKSEEVNA, 1878-1955)



IMSHENETSKIY, A.A.

Selection of yeast cultures for the ferment industry. Vest. AN SSSR  
25 no.1:46-48 Ja '55. (MIRA 8:3)

1. Chlen-korrespondent Akademii nauk SSSR.  
(Yeast)

IMSHENETSKIY, A. A.

USSR/Biology - Microbiology

Card 1/1 Pub. 124 - 7/32

Author : Imshenetskiy, A. A., Memb. Corresp., Acad. of Sc., USSR

Title : About the perspectives in the development of microbiology

Periodical : Vest. AN SSSR 25/6, 44-51, June 1955

Abstract : The prospects for the development of microbiological science and industry in the USSR are debated. The problems and difficulties facing microbiologists are listed. It is pointed out that the most important contribution to the development of microbiology was the explanation of the role assumed by the microorganism in the fertility of the soil.

Institution : .....

Submitted : .....

IMSIENETSKIY, A. A.

"Experimental Variation in Micro-Organisms", paper given at the  
International Genetics Symposium, 6-12 Sept 1956, English translation

So: 3069259, 26 Dec 56

NOVOGRUDSKIY, David Moiseyevich, 1898-1953; IMSHENETSKIY, A., redaktor

[Soil microbiology (soil as a habitat for soil micro-organisms);  
principle groups of the soil micropopulation] Pochvennaya mikro-  
biologiya (pochva kak sreda naseobitaniya pochvennykh mikroorga-  
nizmov); osnovnye gruppy pochvennoye mikronaseleniya) Alma-Ata,  
Akademiya nauk Kazakhskoi SSR, 1956. 401 p. (MLRA 10:2)

(Soil micro-organisms)

KOSTYCHEV, Sergey Pavlovich, 1877-1931; ~~IMSHENETSKIY, A.A.~~, redaktor;  
BEDIN, B.I., redaktor; ASTAF'Yeva, T.A., ~~tekhnicheskii~~ redaktor.

[Selected works on the physiology and biochemistry of microorganisms]  
Isbrannye trydy po fiziologii i biokhimi mikroorganizmov. Moskva,  
Izd-vo Akademii nauk SSSR. Vol.1. 1956. 354 p. (MLRA 9:4)

1.Chlen-korrespondent AN SSSR (for Imshenetskiy)  
(MICRO-ORGANISMS)

IMSHENETSKIY, A. A.

Obtaining cell-free liquid from *Azotobacter* cultures. A. A. Imshenetskiy, L. I. Solntseva, K. Z. Petrova, and N. M. Kuranova (Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow). *Mikrobiologiya* 25, 104-70 (1956).—For high N-fixing capacity *A. chroococcum* should be cultured in thick, non-nitrogenous media; sugar utilization is then complete in 21-48 hours. All tested cultures had about the same capacity, 15.8-18.1 mg. N/g. of glucose. The best method for destroying the *Azotobacter* cells is grinding with  $Al_2O_3$ . For a mucilaginous consistency of the cell-free liquid it is best to centrifuge in water, which may be phosphate buffered; the centrifuged liquid is not totally cell-free. J. F. Smith

IMSHENETSKIY, A.A.

Noncellular nitrification. IV. Inactivating thermophilic  
Nitrosomonas europaea enzymes which oxidize ammonia.  
A. A. Imshenetskiy, E. L. Rulian, and E. I. Artemova  
(Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow). *Mikro-  
biologiya* 23, 12-15(1950); cf. C.A. 50, 4803c. Filtered  
*N. europaea* autolyzate retains its power to oxidize NH<sub>3</sub>  
even after brief boiling, but is inactivated by boiling 30  
min. or autoclaving 10 min. (0.5 atm.). In this thermophilic  
property it resembles peroxidase systems. Y. E. S.

IMSHENETSKIY, A.A.

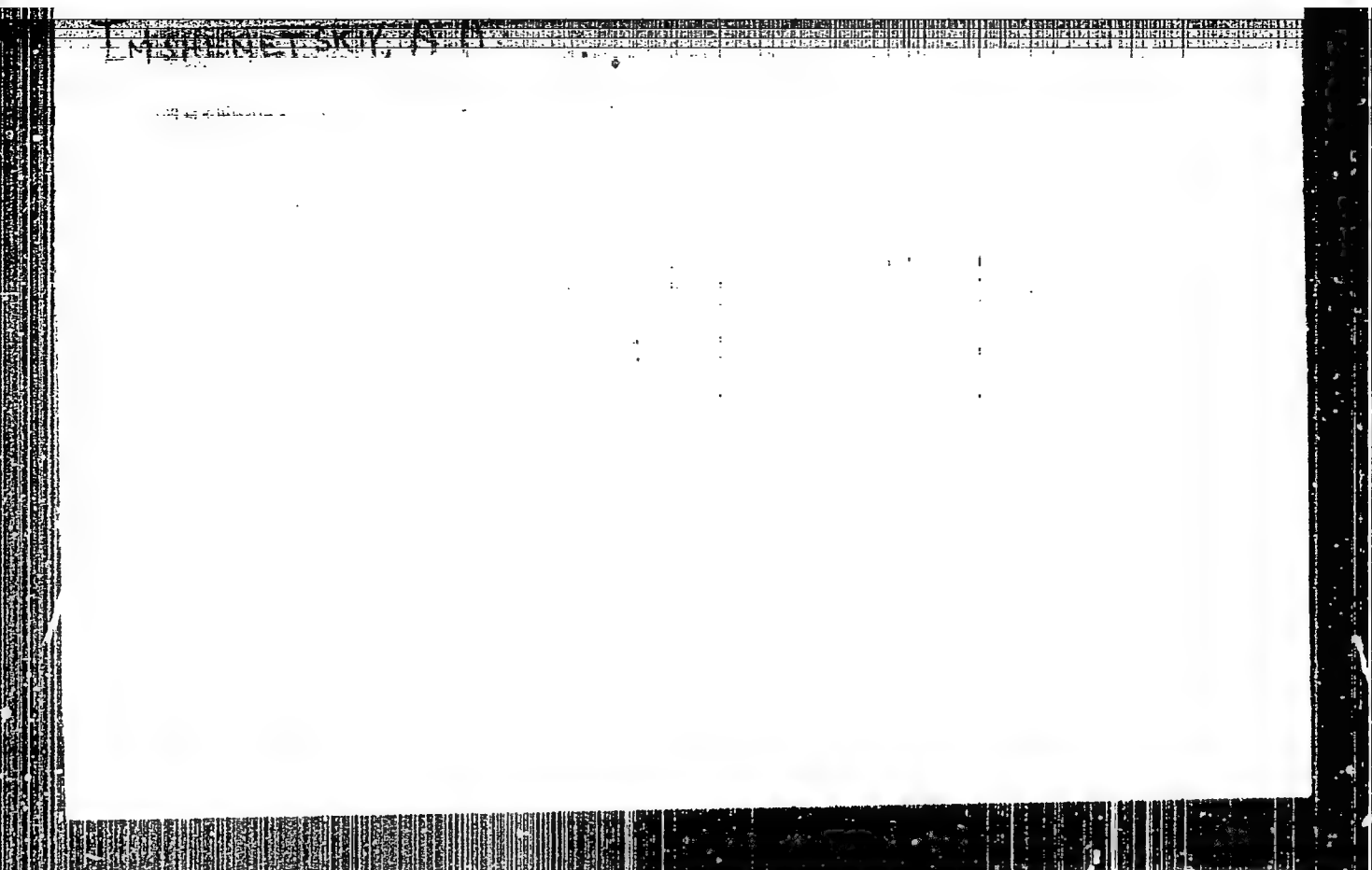
Louis Pasteur and contemporary general microbiology; 60th  
anniversary of his death. Mikrobiologiya 25 no.1:115-124 Ja-P '56  
(MIRA 9:5)

(BIOGRAPHIES,  
Pasteur, Louis (Rus))



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IMSHENETSKY, A A

✓ Results of discussions on problems in soil microbiology  
A. Imshenetskiy, Mikrobiologiya 21, 331-41 (1984).  
Research techniques.

IMSHENETSKIY, A.A.

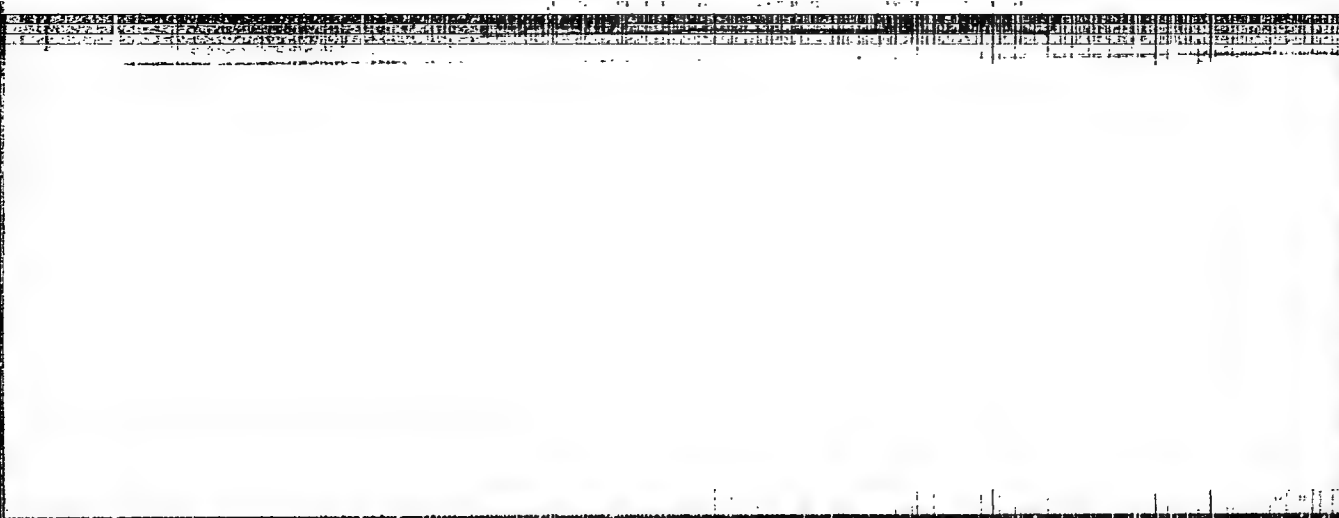
Practical use of nitrifying bacteria in the 17th century. Mikrobiologiya  
25 no.3:376-379 My-Je '56. (MIRA 9:10)  
(BACTERIA, NITRIFYING) (SALTPETER)

1500

[illegible]

**"APPROVED FOR RELEASE: 08/10/2001**

**CIA-RDP86-00513R000618610006-3**



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**CIA-RDP86-00513R000618610006-3"**

IMSHENETSKIY, A.A. [Imsenecki, A.A.]

"Cytology of bacteria." M.A.Peshkov. Reviewed by A.A.Imsenecki.  
Mikrobiologiya 25 no.4:508-513 J1-Ag '56. (MIRA 9:10)  
(BACTERIA) (PESHKOV, M.A.)

IMSHENETSKIY, A.

"Bacterial cytology" by M.A.Peshkov. Reviewed by A.Imshenetski.  
Zhur.mikrobiol.epid. i immun. 27 no.12:106-109 D '56. (MIRA 10:1)  
(CELLS) (BACTERIOLOGY) (PESHKOV, M.A.)

IMSHENETSKIY, A.A.

Ferments produced by micro-organisms and their industrial use.  
Priroda 45 no.5:17-26 My '56. (MLBA 9:8)

1. Chlen-korrespondent Akademii nauk SSSR.  
(Bacteriology--Cultures and culture media) (Enzymes)



IMSHENETSKIY A.A.

BUTKEVICH, Vladimir Stepanovich; IMSHENETSKIY A.A., otvetstvennyy redaktor;  
MATVEYENKO, G.A., redaktor izdatel'stva;

[Selected works] Izbrannye trudy. Moskva, Izd-vo Akad.nauk SSSR.  
Vol.1. 1957. 632 p. (MIRA 10:11)

1. Chlen-korrespondent AN SSSR (for Imshenetakiy).  
(Protein metabolism) (Fungi) (Acids, Organic)  
(Plants--Respiration)

IMSHENETSKIY, A. A.

USSR/General Division. Congresses. Sessions. Conferences. A-4

Abs Jour : Ref Zhur-Biologiya, No 3, 1958, 9315

Author : A. A. Imshenetskiy

Inst :

Title : A Symposium on Genetics in Japan

Orig Pub : Vestn. AN SSSR, 1957, No 1, 63-67

Abstract : Account of a symposium on genetics held in Japan in September 1956. The themes of the reports heard at the plenary sessions, including those of the Soviet geneticists, are reported and the names of the ten active sections of the symposium are given. Noted are the considerable successes achieved by the world geneticists in the investigation of the biochemical bases of heredity; polyploids; heterosis; cytology of cancer, and other problems which are of great

Card 1/2

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CIA-RDP86-00513R000618610006-1

IMSHENETSKIY, A. A.

USSR/General Division. Congresses. Sessions. Conferences. A-4

Abs Jour : Ref Zhur-Biologiya, No 3, 1958, 9316

Author : A. A. Imshenetskiy

Inst :

Title : International Symposium on Genetics in Tokyo (Sep 6 1956)

Orig Pub : Izv. AN SSSR ser. biol., 1957, No 3, 382-384

Abstract : No abstract

Card 1/1

*Imshenetskiy, A. A.*

IMSHENETSKIY, A. A.

Activity of microbiological research institutions in Japan.

Mikrobiologiya 26 no.2:248-254 Mr-Apr '57. (MIRA 10:10)

(MICROBIOLOGY

activity of research institutions in Japan (Rus))

F-1

USSR / Microbiology. General Microbiology.

Abs Jour : Ref Zhur - Biol., No 20, 1958, No. 90717

Author : ~~Imshenetskiy, A. A.~~; Perova, K. Z.

Inst : Not given

Title : Morphological and Physiological Characteristics of Yeast Adapted to Phenol and Mercuric Chloride

Orig Pub : Mikrobiologiya, 1957, 26, No 3, 297-305 (res. Eng.)

Abstract : A comparative study of two strains of *Saccharomyces cerevisiae* adapted to phenol and mercuric chloride showed a sharp difference in their morphological and physiological properties. Cells of the "phenolized" yeast were very large, elongated, often without vacuoles, and contained much fat and a little metachromatin; the nuclei were large, porous, polymorphous, and strained poorly. For the "mercuric chloride" yeast characteristic cells were small in size, round or polygonal in form, with large vacuoles

Card 1/2

USSR / Microbiology. General Microbiology.

F-1

Abs Jour : Ref Zhur - Biol., No 20, 1958, No. 90717

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618610006-3"

which contained some metachromatic granules; the nuclei were small, compact, round with regular outlines, chromophilic; there was an insignificant amount of fat in the cells. The "mercuric chloride" yeast proved to be physiologically more active than the yeast adapted to phenol. Thus, in analytical experiments they fermented glucose more quickly and the "phenolized" more slowly than the original yeast. The obtained results verified the common theory about the existence of qualitatively different reactions of microorganisms to the effect of various physical factors. -- N. A. Avdiyevich

Card 2/2

IMSHENETSKIY, A.A.

Forty-year study of variability of micro-organisms in the U.S.S.R.

Mikrobiologiya 26 no.6:632-650 M-D '57.

(MIRA 11:3)

(MICROORGANISMS,

variability research in Russia (Rna)

IMSHENETSKIY, A. A.

USSR/General Division. Congresses. Sessions. Conferences A-4

Abs Jour : Ref Zhur-Biologiya, No 3, 1958, 9317

Author : A. A. Imshenetskiy

Inst :

Title : International Symposium on Genetics

Orig Pub : Botan. zh., 1957, 42, No 4, 665-674

Abstract : No abstract

Card 1/1

APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000618610006-3

IMSHENETSKIY, A. A.

Symposium on genetics in Japan. Priroda 46 no. 4: 49-54  
Ap '57.

(MLRA 10:5)

1. Chlen-korrespondent AN SSSR. Institut mikrobiologii Akademii  
nauk SSSR (Moskva).  
(Japan--Genetics)

BUTKEVICH, Vladimir Stepanovich; IMSHENETSKIY, A.A., -otvetstvennyy red.;  
MATVEYENKO, T.A., red.izd-va; ZELENIKOVA, Ye.V., tekhn.red.

[Selected works] Izbrannye trudy. Moskva, Izd-vo Akad.nauk SSSR.  
Vol. 2. 1958. 389 p. (MIRA 11:6)

1. Chlen-korrespondent Akademii nauk SSSR (for Imshenetskiy)  
(Bacteria)

IMSHENETSKIY, A.A.

Activities of the Institute of Microbiology of the Academy of Sciences  
of the U.S.S.R. during the past 25 years. Trudy Inst. mikrobiol.  
no.5:6-17 '58 (MIRA 11:6)

1. Institut mikrobiologii AN SSSR.  
(MICROBIOLOGY,

Institute of Microbiol. of Acad. of Sciences of USSR  
(Rus))

30-4-10/44

AUTHOR: Imshenetskiy, A. A., Corresponding  
Member of the AS USSR

TITLE: In England's Microbiological Institutions  
(V mikrobiologicheskikh uchrezhdeniyakh Anglii)

PERIODICAL: Vestnik Akademii Nauk SSSR, 1958, . . . , Nr 4,  
pp. 66-68 (USSR)

ABSTRACT: In the year 1956 Professor Kh. G. Tornton, a very well-known English microbiologist, was guest of the Soviet microbiologists. In October 1957 G. K. Skryabin, Candidate of Biological Sciences, and the author of this paper returned the visit. They came to see at first the microbiological division of the Rotamsted experimental station, which is a great scientific combine. The microbiologists here have the possibility of carrying on their researches together with agrochemists, soil-chemists, botanists, biochemists, and phytopathologists. They deal there with problems of soil-microbiology, especially with the problem of Bulbous-bacteria. The author mentions that about the decomposition of cyclic compounds V. O. Tauson in the Soviet-Union wrote a detailed work.

Card 1/2



17(4)

AUTHOR:

Imshenetskiy, A. A., Corresponding Member, SOV/30-58-11-13/48  
AS USSR

TITLE:

International Congress on Microbiology (Mezhdunarodnyy  
mikrobiologicheskiy kongress)

PERIODICAL:

Vestnik Akademii nauk SSSR, 1958, Nr 11,  
pp 69 - 72 (USSR)

ABSTRACT:

The 7th Congress on Microbiology was held in Stockholm from August 4 to 9. About 2000 persons from 45 countries participated in the meetings. The Soviet delegation consisted of P.Ye.Vizir', G.A. Zavarzin, N.D.Iyerusalimskiy, A.A.Imshonetskiy (head of delegation), N.A.Krasil'nikov, S.I.Kuznetsov, R.A.Kukaynis, L.G.Loginova, R.V.Feniksova. Also a large group of Soviet medical microbiologists and virologists headed by V.M.Zhdanov participated in the work of the congress. The Soviet scientists submitted 17 reports, 10 of which were actually delivered at the congress. Three Soviet scientists

Card 1/2

International Congress on Microbiology

SOV/30-58-11-15/48

were vice-presidents of various sections. Some of them took part in the work of the International Taxonomical Committee which met during the Stockholm conference. The work of the congress was done in the following six sections: physiology and genetics of microbes; chemistry of microbes; immunology; virology; medical and veterinary microbiology; technical microbiology. A total of almost 500 reports were delivered at the congress. The scientific and industrial exhibitions as well as the scientific films shown at the congress were reported to have been highly interesting. The bulk of reports was devoted to the following three problems: microbe metabolism; growth, development, and multiplication; microbe genetics. The report on the use of microbes as agents for a chemical synthesis was considered especially impressive. The 8th Congress on Microbiology will probably be held in Montreal (Canada) in 1962.

Card 2/2

IMSHENETSKIY, A.A.

BELOZERSKIY, A.N., IMSHENETSKIY, A.A., ZAYTSEVA, G.N., PEROVA, K.Z.

Comparative morphology and biochemistry of mucoid and matt and dull cultures of *Azotobacter chroococcum* [with summary in English]. Mikrobiologiya 27 no.2:150-156 Mr-Apr '58 (MIRA 11:5)

1. Institut mikrobiologii Akademii nauk SSSR i Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.

(AZOTOBACTER, culture

chroococcum, comparative morphol. & biochem. of slimy and dull cultures (Rus))

IMSHINETSKIY, A.A.

Microbiological laboratories in England. Mikrobiologiya 27 no.2  
261-270 Mar-Apr '58 (MIRA 11:5)

(MICROBIOLOGY,

laboratories in Gt. Brit. (Rus))

(LABORATORIES,

microbiol. in Gt. Brit. (Rus))

IMSHENETSKIY A.A.

IYERUSALIMSKIY, N.D., IMSHENETSKIY, A.A., KOSIKOV, K.V., KRASIL'NIKOV, N.A.  
RAUTENSHTEYN, Ya.I.

Matus Osharovich Streshinski; an obituary. Mikrobiologiya 27  
no.2:271 Mz-Ap '58 (MIRA 11:5)  
(STRESHINSKII, MATUS OSHAROVICH, 1912-1957)

IMSHENETSKIY, A.A., SOLONTSEVA, L.I.

~~Filtrable forms of bacteria~~ [with summary in English]. Mikrobiologiya  
27 no.3:276-282 My-Je '58 (MIRA 11:9)

1. Institut mikrobiologii AN SSSR;  
(BACTERIA,  
filtrable forms (Rus))

IMSHENETSKIY, A.A., KUEYURINA, L.A.

Searching in nature for yeasts assimilating pentoses [with summary in English]. Mikrobiologiya 27 no.4:489-496 J1-Ag '58 (MIRA 11:9)

1. Institut mikrobiologii AN SSSR.  
(YEASTS, metabolism  
pentose-utilizing cultures (Rus))  
(PENTOSE, metabolism  
yeasts (Rus))

KRIS, Anatoliy Yevseyevich; IMSHENETSKIY, A.A., otv.red.; LITVINOV, M.A.,  
red, izd-va; MOSKVICHENVA, N.I., tekhn.red.

[Marine microbiology (deep-sea microbiology)] Morskaya mikro-  
biologiya (glubokovodnaya). Moskva, Izd-vo Akad.nauk SSSR, 1959.  
453 p. (MIRA 12:3)

1. Chlen-korrespondent Akademii nauk SSSR (for Imshenetskiy).  
(Marine biology)



30(7)  
AUTHOR:

SOV/26-59-2-13/53  
Imshenetskiy, A.A., Corresponding Member (Moscow)

TITLE:

Urgent Problems of Microbiology (Aktual'nyye voprosy mikrobiologii) VII International Microbiological Congress in Stockholm (VII Mezhdunarodnyy mikrobiologicheskiy kongress v Stokgol'me)

PERIODICAL:

Priroda, 1959, Nr 2, pp 73-75 (USSR)

ABSTRACT:

The above-mentioned Congress took place in Stockholm in August 1958. About 2,000 scientists took part in it. The Soviet delegation was composed of: A.A. Imshenetskiy (head of the delegation), P.Ye. Vizir', G.A. Zavarzin, N.D. Iyerusalimskiy, N.A. Krasil'nikov, S.I. Kuznetsov, R.A. Kukaynis, L.G. Loginova, G.K. Bkryabin and R.V. Feniksova. All papers read at the Congress were concerned with three problems: 1) the metabolism of microbes; 2) the problem of growth, development and reproduction of microorganisms;

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IMSHENETSKIY, A.A.

Results of the Seventh International Microbiological Congress.  
Izv. AN SSSR Ser.biol. 24 no.1:144-146 Ja-F '59. (MIRA 12:2)  
(STOCKHOLM--MICROBIOLOGY--CONGRESSES)

IMSHENETSKIY, A.A.

Reports on general microbiology at the Seventh International  
Congress of Microbiology. Mikrobiologiya 28 no.1:116-139 Ja-F  
'59. (MIRA 12:3)

(MICROBIOLOGY)

~~IMSHENETSKIY, A.A.~~; PEROVA, K.Z.; ZAYTSEVA, T.A.; BELOZHERSKIY, A.N.

Transmission of streptomycin resistance in staphylococci by means of deoxyribonucleic acid. Mikrobiologiya 28 no.2: 187-190 Mr-Apr '59. (MIRA 12:5)

1. Institut mikrobiologii i Institut biokhimii AN SSSR.

(STREPTOMYCIN, eff.

on Micrococcus pyogenes, transfer of resist. with deoxyribonucleic acid (Rus))

(MICROCOCCLUS PYOGENES, eff. of drugs on, streptomycin, transfer of resist. with deoxyribonucleic acid (Rus))

(DESOXYRIBONUCLEIC ACID,

on Micrococcus pyogenes, transfer of streptomycin-resist. (Rus))

IMSHENETSKIY, A.A.

Report of the Rothamsted Experimental Station for 1958. Mikrobiologiya  
28 no.6:950-953 N-D '59. (MIRA 13:4)  
(GREAT BRITAIN--SOIL BACTERIOLOGY--RESEARCH)

17(2,10)

80V/20-124-4-56/67

AUTHORS:

Imshenetskiy, A. A., Corresponding Member AS USSR, Solntseva, L.I.,  
Kuranova, N. F.

TITLE:

Experimental Generation of Active Variants of Citric-Acid-Producing  
Aspergillus Niger (Eksperimental'noye polucheniye aktivnykh  
variantov Aspergillus niger, obrazuyushchikh limonnuyu kislotu)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 4, pp 925-927 (USSR)

ABSTRACT:

It is a well-known fact that micro-organism mutants produced by the influence of radiant energy possess, as a rule, reduced biochemical activity. Some of them belong to the sublethal variants and perish on transplantation, others show definite signs of degeneration, form only small colonies, grow slowly, partially or totally lose the activities of various ferment systems, etc. The development of mutants that possess more active ferment complexes, or that effect the biosynthesis of certain substances more intensively than the initial form does, are comparatively rare. However, these mutants are of particular interest. In the course of these 10 years it has been possible to produce, by the employment of radiant energy in bacteria, yeast and mold fungi, a number of practically utilizable mutants (e.g. Penicillium chrysogenum with a penicillin quantity of 100 times that of the wild initial form).

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Experimental Generation of Active Variants of Citric Acid-Producing  
Aspergillus Niger

Citric acid is obtained from a culture of *Aspergillus niger*, which latter oxidizes saccharose into the acid. As the currently used strains of *Aspergillus* did not include any irradiation-produced variants, the authors studied the physiology of the variants produced by means of ultraviolet light irradiation. The initial culture was the 6/5 developed in the Leningradskiy zavod limonnoy kisloty (Leningrad Plant for Citric Acid). The 1-conidial cultures obtained from it had the same activities with regard to the production of the acid as the initial culture. The cultivation of one of the former was continued. The study of this capacity in individual mutants has facilitated the selection of the most promising cultures ( $T_1$ ,  $T_2$ , and X), all of which produced more acid than the initial culture had done. They developed after the administration of 4 doses of ultraviolet irradiation. Their genealogies are shown in figure 1. Mutant  $T_1$  differed also with regard to morphology.

Table 1 shows the formation dynamics of citric acid. From this the following conclusions are derived: (1) The mycelium dry weight of mutant  $T_1$  is 25-30 % lower than that of the initial form. (2) Per

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1 g dry mycelium, the ultraviolet mutant consumes 26-51 % more

Experimental Generation of Active Variants of Citric-Acid-Producing  
*Aspergillus Niger*

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sugar than the initial form does. (3) Per 1 g dry mycelium, the mutant forms 46-84 % more citric acid than the initial form does. The absolute acid quantity is 16-22 % higher in the mutant culture medium. (4) The citric acid yield, calculated per sugar consumed, varies with the age of the culture, and is 50.7-63.4 % in the initial culture, and 57.7-74.3 % in the mutant. As is the case in the initial strain, the mutants produce almost exclusively citric acid. The above mentioned increased acid yield cannot be explained by a lower sugar consumption for mycelium formation, and is dependent on the biochemical activity of the culture. There are 1 figure and 1 table.

ASSOCIATION: Institut mikrobiologii Akademii nauk SSSR  
(Institute of Microbiology of the Academy of Sciences, USSR)

SUBMITTED: October 30, 1958

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IMSHENETSKIY, A. A. Dir, Inst. Microbiology, AS USSR

"Ban Biological Weapons."

paper presented at the Pugwash Conference on Disarmament and World Security,  
Moscow, 27 Nov-6 Dec 60.

LOGINOVA, Lyubov' Gavrilovna; IMSHENETSKIY, A.A., otv.red.; MATVEYENKO,  
T.A., red.izd-va; SUSHKOVA, L.A., tekhn.red.

[Physiology of experimentally produced thermophilic yeasts]  
Fiziologiya eksperimental'no poluchennykh termofil'nykh drozhzhei.  
Moskva, Izd-vo Akad.nauk SSSR, 1960. 217 p. (MIRA 13:2)

1. Chlen-korrespondent AN SSSR; rukovoditel' Otdela nasledstven-  
nosti i izmenchivosti mikroorganizmov Instituta mikrobiologii  
AN SSSR (for Imshenetskiy).  
(Yeast)

PASTER, Lui [Pasteur, Louis] [deceased]; IMSHENETSKIY, A.A., red.;  
KOLPAKOVA, Ye.A., red, izd-va; DOROKHINA, I.M., tekhn. red.

^ [Selected works in two volumes] Izbrannye trudy v dnykh tomakh.  
Red. A.A. Imshenetskogo. Moskva, Izd-vo Akad. nauk SSSR. Vol. 2.  
1960. 834 p. (MIRA 14:1)

1. Chlen-korrespondent ~~AM~~ SSSR (for Imshenetskiy).  
(MICROBIOLOGY)

IMSHENETSKIY, A.A. [Imshenets'kiy, O.O.]

Some notes concerning L.A. Liberman's article "Ecological conditions influencing the development of Streptococcus lactis in fresh raw milk." Mikrobiol. zhur. 22 no. 5:72-73 '60. (MIRA 13:10)

1. Institut mikrobiologii AN SSSR (Moskva).  
(STREPTOCOCCUS LACTIS)  
(LIBERMAN, L.A.)

IMSHENETSKIY, A.A.; SOLNTSEVA, L.I.; KURANOVA, N.F.

Experimental variability of *Aspergillus niger*. Part 1: Morphological characteristic of variants obtained as a result of the action of ultraviolet rays. *Mikrobiologiya* 29 no.2:177-183 Apr '60.

(MIRA 14:7)

1. Institut mikrobiologii AN SSSR.

(ASPERGILLUS)

(ULTRAVIOLET RAYS—PHYSIOLOGICAL EFFECT)

IMSHENETSKIY, A.A.

S.A. Waksman; on his 70th birthday. Mikrobiologiya 29 no.2:310-312  
Mr-Apr '60. (MIRA 14:7)

(WAKSMAN, SELMAN ABRAHAM, 1888-)

VYSHELESSKIY, A.N.; ZABOLOTSKIY, M.S.; YEREMENKO, V.V.; IMSHENETSKIY, A.A.;  
KOZIN, N.I.; KOZLOV, V.V.; LEDOVSKIKH, S.I.; LOBANOV, D.I.;  
MUNDRETSOVA, K.A.; RAZUMOV, A.S.; RAUTENSHTEYN, Ya.I.

F.M.Chistiakov; obituary. Mikrobiologiya 29 no.2:313 Mr-Apr '60.  
(MIRA 14:7)

(CHISTIAKOV, FEDOR MAKSIMOVICH, 1898-1959)

IMSHENETSKIY, A.A.; SOLNTSEVA, L.I.; KURANOVA, N.F.

Experimental variability of *Aspergillus niger*. Report No.2: Formation of citric acid by variants of *Asp. niger* obtained through ultraviolet irradiation. Mikrobiologiya 29 no.3:351-357/May-Je '60. (MIRA 13:7)

1. Institut mikrobiologii AN SSSR.

(*ASPERGILLUS NIGER*)

(CITRIC ACID)

(ULTRAVIOLET RAYS—PHYSIOLOGICAL EFFECT)



IMSHENETSKIY, A.A.; PEROVA, K.Z.

Transformation caused by noncellular extracts. Mikrobiologiya  
29 no. 4:505-511 J1-Ag '60. (MIRA 13:10)

1. Institut mikrobiologii AN SSSR.  
(STAPHYLOCOCCUS AUREUS) (DESOXYRIBONUCLEIC ACID)  
(STREPTOMYCIN)

IMSHENETSKIY, A.A.; PEROVA, K.Z.

Transformation of microbes induced by filtrates passed through  
bacterial filters. Mikrobiologiya 29 no.5:673-678 8-0 '60.  
(MIRA 13:11)

1. Institut mikrobiologii AN SSSR.  
(STAPHYLOCOCCUS AUREUS)

(DESOXYRIBONUCLEIC ACID)

IMSHENETSKIY, A.A.

Life at high temperatures. Priroda 49 no.8:19-24 Ag '60.  
(MIRA 13:8)

1. Chlen-korrespondent AN SSSR.  
(Heat--Physiological effect)

IMSHENETSKIY, Aleksandr Aleksandrovich; KOLPAKOVA, Ye.A., red. izd-va;  
MAKUNI, Ye.V., tekhn. red.

[Louis Pasteur; his life and work] Lui Paster; shizn' i tvorche-  
stvo. Moskva, Izd-vo Akad.nauk SSSR, 1961. 68 p. (MIRA 14:6)  
(Pasteur, Louis, 1822-1895)

RUBAN, Yevgeniya Leonardovna; IMSHENETSKIY, A.A., otv. red.; IVANOV, M.V.,  
red. izd-va; ROMANOV, G.N., tekhn. red.

[Physiology and biochemistry of nitrifying micro-organisms] Fiziolo-  
logiya i biokhimiya nitrifitsiruiushchikh mikroorganizmov. Moskva,  
Izd-vo Akad.nauk SSSR, 1961. 173 p. (MIRA 14:6)

1. Chlen-korrespondent AN SSSR (for Imshenetskiy)  
(BACTERIA, NITRIFYING)

IMSHENETSKIY, A. A. (USSR)

"Evolution of Biological Nitrogen Metabolism."

Report presented at the 5th International Biochemistry Congress,  
Moscow, 10-16 August 1961

IMSHENETSKIY, A.A.

Theoretical principles underlying the selection of useful forms  
of microorganisms. Trudy Inst. mikrobiol. no.10:5-24 '61.  
(MIRA 14:7)

1. Institut mikrobiologii AN SSSR.  
(INDUSTRIAL MICROBIOLOGY)

IMSHENETSKIY, A.A.

"Biologiya." Published by the Institute of Scientific Information  
of the Academy of Sciences of the U.S.S.R. Reviewed by A.A.  
Imshenetskii. Mikrobiologiya 30 no.1:181-186 Ja-F '61.

(MIRA 14:5)

(MICROBIOLOGY--PERIODICALS)



IMSHENETSKIY, A. A.; MANSUROVA, S. E.

Interspecies transformation in microorganisms. Mikrobiologiya  
30 no.3:464-465 My-Je '61. (MIRA 15:7)

1. Institut mikrobiologii AN SSSR.

(BACTERIA, EFFECT OF DRUGS ON)

IMSHENETSKIY, A. A.

Microbiology in Cairo. Mikrobiologiya 30 no.3:545-549 My-Je '61.  
(MIRA 15:7)

(CAIRO—MICROBIOLOGY)

IMSHENETSKIY, A.A.

Microbiological research in the United States. Vest. AN SSSR 31 no.6:  
72-75 Je '61. (MIRA 14:6)

1. Chlen-korrespondent AN SSSR.  
(United States—Microbiological research)

IMSHENETSKIY, A.A.

Present-day tasks of general microbiology. Vest. AN SSSR 31  
no.10:43-52 0 '61. (MIRA 14:9)

1. Chlen-korrespondent AN SSSR.  
(MICROBIOLOGICAL RESEARCH)

IMSHENETSKIY, A.A.; UL'YANOVA, O.M.

Experimental production of *Fusarium* variants synthesizing increased amounts of gibberellin. Dokl. AN SSSR 138 no. 5:1204-1207 J<sup>o</sup> '61, (MIRA 14:6)

1. Institut mikrobiologii AN SSSR. 2. Chlen-korrespondent AN SSSR (for Imshenetskiy).
- (FUSARIUM) (GIBBERELLINS) (ULTRAVIOLET RAYS - PHYSIOLOGICAL EFFECT)

KUZNETSOV, S.I.; IVANOV, M.V.; LYALIKOVA, N.N.; IMSHENETSKIY, A.A.,  
otv. red.; SHCHERBAKOV, A.P., red. izd-va; SHEVCHENKO, G.N.,  
tekh. red.

[Introduction to geological microbiology] Vvedenie v geologi-  
cheskuyu mikrobiologiyu. Moskva, Izd-vo Akad. nauk SSSR,  
1962. 238 p. (MIRA 15:3)

1. Chlen-korrespondent Akademii nauk SSSR (for Imshenetskiy).  
(Geology) (Microbiology)

IMSHENETSKY, A. A.

"On Perspectives of development of Exobiology"

Soviet Papers Presented at Plenary Meetings of Committee on Space Research  
(COSPAR) and Third International Space Symposium, Washington, D. C.,  
23 Apr - 9 May 62

DASHENETSKIY, A. A.

"Selection of Microorganisms"

report presented at the 8th International Congress for Microbiology, Montreal,  
Canada, 19-24 Aug 62.



S/865/62/001/000/003/033  
E028/E185

AUTHOR: Imshenetskiy, A.A.  
TITLE: The possibility of the existence and methods of detection of extraterrestrial life  
SOURCE: Problemy kosmicheskoy biologii. v.1. Ed. by N.M. Sisakyan. Moscow, Izd-vo AN SSSR, 1962. 137-144  
TEXT: This is the text of a report at the Soveshchaniye po kosmicheskoy biologii (Conference on Cosmic Biology), held in Moscow (August 17, 1961). The author briefly reviews past and present views on the origin of life and the possibility of the interplanetary transport of life forms by means of radiation pressure. It is simpler in principle to suppose that life forms on other planets will resemble terrestrial unicellular organisms, rather than to postulate the existence of types of metabolism not based on water and carbon. Such organisms can withstand liquid helium temperatures, but -10 °C appears to be the lower limit at which multiplication has been observed. Some thermophilic bacteria can withstand boiling.

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The possibility of the existence...

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E028/E185

for 4 - 5 days, and the author postulates that organisms could have become adapted to temperatures up to 150 °C on other planets. Many lower terrestrial forms are sufficiently radioresistant to withstand the effects of cosmic radiation, but resistance to ultraviolet radiation is much lower. The absence of oxygen is immaterial, as many terrestrial organisms can grow under anaerobic conditions. The author discusses in conclusion various methods proposed for automatically recording the existence of life forms from a vehicle which has landed on a planet.

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IMSHENETSKI, A.A. [Imshenetskiy, A.A.]

Present tasks of general microbiology. Analele biol 16  
no.2:70-81 Mr-Apr '62.

1. Membru corespondent al Academiei de Stiinte a U. R. S. S.

\*

IMSHENETSKIY, A.A.; UL'YANOVA, O.M.

Obtaining mutants from Fusarium producing gibberellin. Mikro-  
biologiya 31 no.4:628-635 J1-Ag '62. (MIRA 18:3)

1. Institut mikrobiologii AN SSSR.

IMSHENETSKIY, A.A.; UL'YANOVA, O.M.

Effect of the metabolites of *Fusarium* mutants on higher plants.  
Mikrobiologiya 31 no.6:1029-1037 N-D '62. (MIRA 16:3)

1. Institut mikrobiologii AN SSSR.  
(FUSARIUM) (GROWTH PROMOTING SUBSTANCES)

DASHENETSKIY, A.A.

"Enzymes in industry" by A.S. Tsyperovich. Reviewed by A.A.  
Dashenetskii. Mikrobiologiya 31 no.6:1129-1130 N-D '62. (MIRA 16'3)

(ENZYMES) (INDUSTRIAL MICROBIOLOGY)

IMSHENETSKIY, A.A., akademik

Space biology as a new field of scientific research.

Vest. AN SSSR 32 no.11:58-63 N '62.

(MIRA 15:11)

(Space biology)

GUTINA, Vera Nikolayevna; IMSHENETSKIY, A.A., akademik, otv. red.;  
RUBIN, Ye.L., red.izd-va; GUS'KOVA, O.M., tekhn. red.

[Physiology of nitrifying bacteria; a historical essay] Fi-  
ziologiya nitrifitsiruiushchikh bakterii; istoricheskii ocherk.  
Moskva, Izd-vo Akad. nauk SSSR, 1963. 165 p. (MIRA 16:5)  
(BACTERIA, NITRIFYING)



IMSHENETSKIY, A. A.,

"Biosynthesis of Vitamin B12 by Different Microorganisms and the Influence of Conditions for Cultivation"

Report to be presented at Medical Society of J. E. PURKYNE, Czech,  
Vitaminological Cong., Prague, Czech., 3-6 Jun 63

IMSHENETSKIY, A. A.

"Sterilisation by Radiation and Vitamins"

Report to be presented at Medical Society of J. E. PURKYNĚ, Czech,  
Vitaminological Cong., Prague Czech., 3-6 Jun 63

ISHENETSKIY, A.A.

Life and Space

Report to be submitted for the 4th International Space Science Symposium  
(COSPAR) Warsaw, 2-12 June 63

IMSHENETSKIY, A.A., akademik; MISHUSTIN, Ye.N.; LOZINOV, A.B., kand.biolog. nauk; KRINOV, Ye.L., doktor geol.-miner. nauk; KVASHA, L.G., kand. geol.-miner.nauk, starshiy nauchnyy sotrudnik; YAVNEL', A.A., kand. fiz.-mat. nauk, starshiy nauchnyy sotrudnik

Concerning reports on the "discovery" of microbes in meteorites.  
Biul. VAGO no.34:58-61 '63. (MIRA 17:4)

1. Direktor Instituta mikrobiologii AN SSSR (for Imshenetskiy).
2. Chlen-korrespondent AN SSSR (for Mishustin).
3. Uchenyy sekretar' Komiteta po meteoritam AN SSSR. (for Krinov).
4. Komitet po meteoritam AN SSSR (for Kvasha, Yavnel').

IMSHENETSKIY, A.A.

Eighth International Microbiological Congress. Izv. AN SSSR. Ser.  
biol. no.2:316-322 Mar-Apr '63. (MIRA 17:5)

IMSHENETSKIY, A.A.

Eighth International Microbiological Congress; general micro-  
biology. Mikrobiologiya 32 no.1: 148-167 '63 (MIRA 17:3)

IMSHENETSKIY, A.A.; ZHIL'TSOVA, G.K.

Cytology of lactic acid bacteria. Mikrobiologiya 32 no.2:  
239-244 Mr-Apr '63. (MIRA 17:9)

1. Institut mikrobiologii AN SSSR.

IMSHENETSKIY, A.A.

Eighth International Congress of Microbiology, agricultural  
and technical microbiology. Mikrobiologiya 32 no.2:334-351  
Mr-Ap '63. (MIRA 17:9)



ISHENETSKIY, A.A.

"Plant physiology and the principles of microbiology" by  
P.A. Genkel'. Mikrobiologiya 32 no.2:371-373 Apr '63.  
(MIRA 17:9)

IMSHENETSKIY, A.A.; SOLNTSEVA, L.I.; KURANOVA, N.F.

Effect of external factors on the mutants of *Aspergillus niger*.  
Mikrobiologiya 32 no.4:616-622 J1-Ag '63. (MIRA 17:6)

1. Institut mikrobiologii AN SSSR.

IMSHENETSKIY, A.A.

Conference on applied microbiology. Mikrobiologiya 32 no.6:  
1105-1109 N-D '63

IMSHENETSKIY, A. A., akademik

Eighth Microbiological Congress. Vest. AN SSSR 33 no. 1:66-69  
Ja '63. (MIRA 16:1)

(Microbiology—Congresses)